REMARKS/ARGUMENT

Claims 7, 25-26, 33 and 34, objected to as being allowable if amended to include the limitation, with the other elements of the respective independent claims, with the other elements of the respective independent claim of the base claim and any intervening claims, have been so amended. Accordingly, Claims 7, 25-26, 33 and 34 stand allowable.

1) Claims 1-6, 8-24, 29-32 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Richards et al (US Pub 2002/0075972) in view of Gossett et al. (US Pub 2004/0095990). Applicants respectfully traverse this rejection, as set forth below.

Independent Claim 1 requires and positively recites a method for sampling a signal comprising: "matching the signal to a first receive pulse shape", "matching the signal to a second receive pulse shape", "sampling **outputs from the first and second matching**" and "creating an output signal from the **sampled outputs**".

Independent Claim 14 requires and positively recites, a method for reducing receiver sensitivity to sample timing errors comprising: "matching a received signal to a first received pulse shape, wherein the first received pulse shape is a representation of a pulse carried in the received signal", "matching the received signal to a second received pulse shape, wherein the second received pulse shape is a representation of the pulse carried in the received signal", "sampling **outputs from the first and second matching**" and "**combining the samples** to create an output signal".

Independent Claim 29, as amended, requires and positively recites, a circuit comprising: "a first matched filter coupled to a signal input, the first matched filter containing circuitry to compare a pulse provided by the signal input to a first receive pulse shape and to provide an

output sample based upon the comparison", "a second matched filter coupled to the signal input, the second matched filter containing circuitry to compare a pulse provided by the signal input to a second receive pulse shape and to provide an output sample based upon the comparison" and "an **equalizer coupled to the first and the second matched filters**, the equalizer containing **circuitry to combine samples produced by the first and the second matched filters to produce an output signal**".

Examiner agrees that Richards does teach or suggest sampling outputs from the first and second matching. Examiner relies instead upon Gossett for such teaching. Applicants respectfully point out that Gossett teaches only a single integrator 108 that samples only a signal coming from one filter (Fig. 1; paragraph [0026], lines 7-8). Nowhere does Gossett teach or suggest that integrator 108 can be used to combine samples from different samplings. As such, Gossett fails to teach or suggest, "sampling **outputs from the first and second matching**" and "creating an output signal from the **sampled outputs**", as required by Claim 1 OR "sampling **outputs from the first and second matching**" and "**combining the samples** to create an output signal", as required by Claim 14 OR "an **equalizer coupled to the first and the second matched filters**, the equalizer containing **circuitry to combine samples produced by the first and the second matched filters to produce an output signal**", as required by Claim 29. Accordingly, the 35 U.S.C. 103(a) rejection of Claims 1, 14 and 29 is overcome.

In proceedings before the Patent and Trademark Office, "the Examiner bears the burden of establishing a prima facie case of obviousness based upon the prior art". In re Fritch, 23 USPQ2d 1780, 1783 (Fed. Cir. 1992) (citing In re Piasecki, 745 F.2d 1468, 1471-72, 223 USPQ 785, 787-88 (Fed. Cir. 1984). "The Examiner can satisfy this burden **only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references**", In re Fritch, 23 USPQ2d 1780, 1783 (Fed. Cir. 1992)(citing In re Fine, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988)(citing In re Lalu, 747 F.2d 703, 705, 223 USPQ 1257, 1258 (Fed. Cir. 1988)).

Although couched in terms of combining teachings found in the prior art, the same inquiry must be carried out in the context of a purported obvious "modification" of the prior art. **The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification.** In re Gordon, 733 F.2d at 902, 221 USPQ at 1127. Moreover, **it is impermissible to use the claimed invention as an instruction manual or "template" to piece together the teachings of the prior art so that the claimed invention is rendered obvious.** In re Gorman, 933 F.2d 982, 987, 18 USPQ2d 1885, 1888 (Fed.Cir.1991). See also Interconnect Planning Corp. v. Feil, 774 F.2d 1132, 1138, 227 USPQ 543, 547 (Fed.Cir.1985).

To establish *a prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitation, with the other elements of the respective independent claims, with the other elements of the respective independent claim. (MPEP § 2143).

Moreover, obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill *in the* art. "The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." *In re Kotzab,* 217 F.3d 1365, 1370, *55* USPQ2d 1313, 1317 (Fed. Cir. 2000). See also *In re Lee,* 277 F.3d 1338, 1342-44, 61 USPQ2d *1430, 1433-34* (Fed. Cir. 2002) (discussing the importance of relying on objective evidence and making specific factual findings with respect to the motivation to combine references); *In re Fine,* 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones, 958* F.2d *347, 21* USPQ2d 1941 (Fed.

Cir. 1992).

Applicants respectfully point out that Examiner has provided no evidence from Gossett that it teaches or suggests combining outputs from first and second matching circuits. Applicants further point out that any subsequent statement by Examiner that modifications of the prior art to meet the claimed invention would have been "well within the ordinary skill of *the* art at *the* time the claimed invention was made" because the references relied upon teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish *a* prima *facie case of* obviousness without some objective reason to combine the teachings of the references. *Ex parte Levengood, 28* USPQ2d 1300 (Bd. Pat. App. & Inter. *1993).* See also *In re Kotzab,* 217 F.3d 1365, 1371, 55 USPQ2d *1313,* 1318 (Fed. Cir. 2000) (Court reversed obviousness rejection involving technologically simple concept because there was no finding as to the principle or specific understanding within the knowledge of a skilled artisan that would have motivated the skilled artisan to make the claimed invention); *Al-Site Corp. v. VSIInt'l Inc.*, 174 F.3d 1308,50 USPQ2d 1161 (Fed. Cir. 1999) (The level of skill in the art cannot be relied upon to provide the suggestion to combine references).

Claims 2-6, 8-13, 15-24, 30-32 and 35 stand allowable as depending directly, or indirectly, respectively from allowable Claims 1, 14 and 29.

Claim 2 further defines the method of claim 1, **wherein the first and the second receive pulse shapes are essentially equal**, and **wherein the first receive pulse shape has been advanced a first time offset and the second received pulse shape has been retarded a second time offset**. Claim 2 depends from Claim 1 and stands allowable for the same reasons set forth above in support of the allowance of Claim 1. Moreover, Examiner has similarly failed to set forth any rationale WHERE either of the cited references discloses the above high-lighted limitation, with the other elements of the respective independent claim. As such, Examiner has not set forth a prima facie case of obviousness of Claim 2. Accordingly, the 35 U.S.C. 103(a) rejection of Claim 2 is improper and must be withdrawn.

Claim 3 further defines the method of claim 2, **wherein the first time offset and the second time offset are essentially equal**. Claim 3 depends from Claim 2 and stands allowable for the same reasons set forth above in support of the allowance of Claim 2. Moreover, Examiner has similarly failed to set forth any rationale WHERE either of the cited references discloses the above high-lighted limitation, with the other elements of the respective independent claim. As such, Examiner has not set forth a prima facie case of obviousness of Claim 3. Accordingly, the 35 U.S.C. 103(a) rejection of Claim 3 is improper and must be withdrawn.

Claim 4 further defines the method of claim 2, wherein the **first and the second time offsets can be determined from characteristics of the signal**. Claim 4 depends from Claim 2 and stands allowable for the same reasons set forth above in support of the allowance of Claim 2. Moreover, Examiner has similarly failed to set forth any rationale WHERE either of the cited references discloses the above high-lighted limitation, with the other elements of the respective independent claim. As such, Examiner has not set forth a prima facie case of obviousness of Claim 4. Accordingly, the 35 U.S.C. 103(a) rejection of Claim 4 is improper and must be withdrawn.

Claim 5 further defines the method of claim 2, wherein the **first and the second time offsets can be determined adaptively**. Claim 5 depends from Claim 2 and stands allowable for the same reasons set forth above in support of the allowance of Claim 2. Moreover, Examiner has similarly failed to set forth any rationale WHERE either of the cited references discloses the above high-lighted limitation, with the other elements of the respective independent claim. As such, Examiner has not set forth a prima facie case of obviousness of Claim 5. Accordingly, the 35 U.S.C. 103(a) rejection of Claim 5 is improper and must be withdrawn.

Claim 6 further defines the method of claim 1, wherein the **sampling occurs at the same time for each output**. Claim 6 depends from Claim 1 and stands allowable for the same reasons set forth above in support of the allowance of Claim 1. Moreover, Examiner has similarly failed to set forth any rationale WHERE either of the cited references discloses the above high-lighted limitation, with the other elements of the respective independent claim. As such, Examiner has

not set forth a prima facie case of obviousness of Claim 6. Accordingly, the 35 U.S.C. 103(a) rejection of Claim 6 is improper and must be withdrawn.

Claim 8 further defines the method of claim 1, wherein the creating comprises **adding the sampled outputs together**. Claim 8 depends from Claim 1 and stands allowable for the same reasons set forth above in support of the allowance of Claim 1. Moreover, Examiner has similarly failed to set forth any rationale WHERE either of the cited references discloses the above high-lighted limitation, with the other elements of the respective independent claim. As such, Examiner has not set forth a prima facie case of obviousness of Claim 8. Accordingly, the 35 U.S.C. 103(a) rejection of Claim 8 is improper and must be withdrawn.

Claim 9 further defines the method of claim 8, wherein **samples from each output are multiplied by a weighting factor prior to the adding**. Claim 9 depends from Claim 8 and stands allowable for the same reasons set forth above in support of the allowance of Claim 1. Moreover, Examiner has similarly failed to set forth any rationale WHERE either of the cited references discloses the above high-lighted limitation, with the other elements of the respective independent claim. As such, Examiner has not set forth a prima facie case of obviousness of Claim 9. Accordingly, the 35 U.S.C. 103(a) rejection of Claim 9 is improper and must be withdrawn.

Claim 10 further defines the method of claim 9, wherein the **weighting factor is the same for all samples from an output**. Claim 10 depends from Claim 9 and stands allowable for the same reasons set forth above in support of the allowance of Claim 9. Moreover, Examiner has similarly failed to set forth any rationale WHERE either of the cited references discloses the above high-lighted limitation, with the other elements of the respective independent claim. As such, Examiner has not set forth a prima facie case of obviousness of Claim 10. Accordingly, the 35 U.S.C. 103(a) rejection of Claim 10 is improper and must be withdrawn.

Claim 11 further defines the method of claim 9, wherein the **weighting factor can be different for each output**. Claim 11 depends from Claim 9 and stands allowable for the same reasons set forth above in support of the allowance of Claim 9. Moreover, Examiner has similarly failed to set forth any rationale WHERE either of the cited references discloses the above high-lighted limitation, with the other elements of the respective independent claim. As such, Examiner has not set forth a prima facie case of obviousness of Claim 11. Accordingly, the 35 U.S.C. 103(a) rejection of Claim 11 is improper and must be withdrawn.

Claim 12 further defines the method of claim 1, wherein the creating comprises **combining the outputs in a tapped-delay line fashion**. Claim 12 depends from Claim 1 and stands allowable for the same reasons set forth above in support of the allowance of Claim 1. Moreover, Examiner has similarly failed to set forth any rationale WHERE either of the cited references discloses the above high-lighted limitation, with the other elements of the respective independent claim. As such, Examiner has not set forth a prima facie case of obviousness of Claim 12. Accordingly, the 35 U.S.C. 103(a) rejection of Claim 12 is improper and must be withdrawn.

Claim 13 further defines the method of claim 12, wherein the output signal can be expressed as:

$$\mathrm{Re}[\sum_{k=0}^{L-1}\{\alpha(k)-j\beta(k)\}y(n-k)]=\sum_{k=0}^{L-1}\{\alpha(k)y_i(n-k)+\beta(k)y_q(n-k)\},$$

wherein the output signal is real-valued, □ and □ are weighting factors, $y_i(n)$ and $y_q(n)$ are the outputs, and $y(n)$ is equal to $y_i(n)+y_q(n)$, and L is the length of the tapped-delay line. Claim 13 depends from Claim 12 and stands allowable for the same reasons set forth above in support of the allowance of Claim 12. Moreover, Examiner has similarly failed to set forth any rationale WHERE either of the cited references discloses the above high-lighted limitation, with the other elements of the respective independent claim. As such, Examiner has not set forth a prima facie case of obviousness of Claim 13. Accordingly, the 35 U.S.C. 103(a) rejection of Claim 13 is improper and must be withdrawn.

Claim 15 further defines the method of claim 14, wherein the **first received pulse shape is advanced by a first time offset and the second received pulse shape is retarded by a second time offset**. Claim 15 depends from Claim 1 and stands allowable for the same reasons set forth above in support of the allowance of Claim 14. Moreover, Examiner has similarly failed to set forth any rationale WHERE either of the cited references discloses the above high-lighted limitation, with the other elements of the respective independent claim. As such, Examiner has not set forth a prima facie case of obviousness of Claim 15. Accordingly, the 35 U.S.C. 103(a) rejection of Claim 15 is improper and must be withdrawn.

Claim 16 further defines the method of claim 15, wherein the **first and the second time offsets are essentially equal**. Claim 16 depends from Claim 15 and stands allowable for the same reasons set forth above in support of the allowance of Claim 15. Moreover, Examiner has similarly failed to set forth any rationale WHERE either of the cited references discloses the above high-lighted limitation, with the other elements of the respective independent claim. As such, Examiner has not set forth a prima facie case of obviousness of Claim 16. Accordingly, the 35 U.S.C. 103(a) rejection of Claim 16 is improper and must be withdrawn.

Claim 17 further defines the method of claim 15, wherein the **first and the second time offsets can be chosen based upon an auto-correlation function of the pulse**. Claim 17 depends from Claim 15 and stands allowable for the same reasons set forth above in support of the allowance of Claim 15. Moreover, Examiner has similarly failed to set forth any rationale WHERE either of the cited references discloses the above high-lighted limitation, with the other elements of the respective independent claim. As such, Examiner has not set forth a prima facie case of obviousness of Claim 17. Accordingly, the 35 U.S.C. 103(a) rejection of Claim 17 is improper and must be withdrawn.

Claim 18 further defines the method of claim 15, wherein the **first and the second time offsets can be chosen adaptively**. Claim 18 depends from Claim 15 and stands allowable for the same reasons set forth above in support of the allowance of Claim 15. Moreover, Examiner has similarly failed to set forth any rationale WHERE either of the cited references discloses the

above high-lighted limitation, with the other elements of the respective independent claim. As such, Examiner has not set forth a prima facie case of obviousness of Claim 18. Accordingly, the 35 U.S.C. 103(a) rejection of Claim 18 is improper and must be withdrawn.

Claim 19 further defines the method of claim 14, wherein in **an additive white Gaussian noise situation, the outputs can be combined by addition**. Claim 19 depends from Claim 14 and stands allowable for the same reasons set forth above in support of the allowance of Claim 14. Moreover, Examiner has similarly failed to set forth any rationale WHERE either of the cited references discloses the above high-lighted limitation, with the other elements of the respective independent claim. As such, Examiner has not set forth a prima facie case of obviousness of Claim 19. Accordingly, the 35 U.S.C. 103(a) rejection of Claim 19 is improper and must be withdrawn.

Claim 20 further defines the method of claim 19, wherein the **samples from one output are multiplied by a first weighting factor and the samples from the other output are multiplied by a second weighting factor prior to the addition**. Claim 20 depends from Claim 19 and stands allowable for the same reasons set forth above in support of the allowance of Claim 19. Moreover, Examiner has similarly failed to set forth any rationale WHERE either of the cited references discloses the above high-lighted limitation, with the other elements of the respective independent claim. As such, Examiner has not set forth a prima facie case of obviousness of Claim 20. Accordingly, the 35 U.S.C. 103(a) rejection of Claim 20 is improper and must be withdrawn.

Claim 21 further defines the method of claim 14, wherein in **a multipath situation, the outputs can be combined in a tapped-delay line fashion**. Claim 21 depends from Claim 14 and stands allowable for the same reasons set forth above in support of the allowance of Claim 14. Moreover, Examiner has similarly failed to set forth any rationale WHERE either of the cited references discloses the above high-lighted limitation, with the other elements of the respective independent claim. As such, Examiner has not set forth a prima facie case of

obviousness of Claim 21. Accordingly, the 35 U.S.C. 103(a) rejection of Claim 21 is improper and must be withdrawn.

Claim 22 further defines the method of claim 21, wherein the combining can be expressed as:

$$\mathrm{Re}[\sum_{k=0}^{L-1}\{\alpha(k)-j\beta(k)\}y(n-k)]=\sum_{k=0}^{L-1}\{\alpha(k)y_i(n-k)+\beta(k)y_q(n-k)\}$$

wherein the output signal is real-valued, □ and □ are weighting factors, $y_i(n)$ and $y_q(n)$ are the outputs, and $y(n)$ is equal to $y_i(n) + y_q(n)$, and L is the length of the tapped-delay line. Claim 22 depends from Claim 21 and stands allowable for the same reasons set forth above in support of the allowance of Claim 21. Moreover, Examiner has similarly failed to set forth any rationale WHERE either of the cited references discloses the above high-lighted limitation, with the other elements of the respective independent claim. As such, Examiner has not set forth a prima facie case of obviousness of Claim 22. Accordingly, the 35 U.S.C. 103(a) rejection of Claim 22 is improper and must be withdrawn.

Claim 23 further defines the method of claim 21, wherein the **combining further comprises equalizing the samples**. Claim 23 depends from Claim 21 and stands allowable for the same reasons set forth above in support of the allowance of Claim 21. Moreover, Examiner has similarly failed to set forth any rationale WHERE either of the cited references discloses the above high-lighted limitation, with the other elements of the respective independent claim. As such, Examiner has not set forth a prima facie case of obviousness of Claim 23. Accordingly, the 35 U.S.C. 103(a) rejection of Claim 23 is improper and must be withdrawn.

Claim 24 further defines the method of claim 23, wherein the **equalizing implements an equalizer of a type selected from a group consisting of a decision feedback equalizer (DFE), a reduced-state sequence estimator (RSSE), a maximum-likelihood sequence estimator (MLSE) or combinations thereof**. Claim 24 depends from Claim 23 and stands allowable for the same reasons set forth above in support of the allowance of Claim 23. Moreover, Examiner has similarly failed to set forth any rationale WHERE either of the cited references discloses the

above high-lighted limitation, with the other elements of the respective independent claim. As such, Examiner has not set forth a prima facie case of obviousness of Claim 24. Accordingly, the 35 U.S.C. 103(a) rejection of Claim 24 is improper and must be withdrawn.

Claim 31 further defines the circuit of claim 29, wherein each matched filter comprises:

a multiplier to multiply the pulse with a receive pulse shape;

an integrator coupled to the multiplier, the integrator to accumulate a value from an output produced by the multiplier; and

a sampler coupled to the integrator, the sampler to periodically create a sample based upon the accumulated value from the integrator. Claim 31 depends from Claim 29 and stands allowable for the same reasons set forth above in support of the allowance of Claim 29. Moreover, Examiner has similarly failed to set forth any rationale WHERE either of the cited references discloses the above limitation, with the other elements of the respective independent claims, with the other elements of the respective independent claim. As such, Examiner has not set forth a prima facie case of obviousness of Claim 31. Accordingly, the 35 U.S.C. 103(a) rejection of Claim 31 is improper and must be withdrawn.

Claim 32 further defines the circuit of claim 31, wherein the sampler is a switch that periodically closes to produce a sample. Claim 32 depends from Claim 31 and stands allowable for the same reasons set forth above in support of the allowance of Claim 31.

Claim 35 further defines the circuit of claim 29, wherein the **first receive pulse shape is an advanced version of the pulse and the second receive pulse shape is a retarded version of the pulse**. Claim 35 depends from Claim 29 and stands allowable for the same reasons set forth above in support of the allowance of Claim 29. Moreover, Examiner has similarly failed to set forth any rationale WHERE either of the cited references discloses the above high-lighted limitation, with the other elements of the respective independent claim. As such, Examiner has not set forth a prima facie case of obviousness of Claim 35. Accordingly, the 35 U.S.C. 103(a) rejection of Claim 35 is improper and must be withdrawn.

2) Claims 36-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Richards et al (US Pub 2002/0075972) in view of Gossett et al. (US Pub 2004/0095990) and further in view of McCorkle (US 6,937,646). Applicants respectfully traverse this rejection, as set forth below.

Independent Claim 36 requires and positively recites, a receiver comprising: "a band select filter coupled to a signal input, the band select filter containing circuitry to selectively pass a portion of a frequency band from a signal provided by the signal input", "an **amplifier coupled to the band select filter**, the amplifier to bring an output of the band select filter to a desired level", "a **first matched filter coupled to the amplifier**, the first matched filter containing **circuitry to compare a pulse provided by the amplifier** to a first receive pulse shape and to provide an output sample based upon the comparison", "a **second matched filter coupled to the amplifier**, the second matched filter containing **circuitry to compare a pulse provided by the amplifier to a second receive pulse shape** and to provide an output sample based upon the comparison" and "a decoder coupled to the first and the second matched filters, the decoder containing circuitry to detect and eliminate errors that may be present in the outputs produced by the first and the second matched filters".

Examiner agrees that Richards does not teach or suggest an amplifier coupled to the band select filter, the amplifier to bring an output of the band select filter to a desired level (Office Action, page 11, lines 16-17). Examiner, however, relies upon Gossett as disclosing an amplifier 102 as being the equivalent.

Applicants respectfully traverse Examiner's interpretation of Richards. Richards does not teach or suggest, a "first matched filter" and a "second matched filter", as suggested by Examiner. Richards actually discloses a first data correlator 1008 and a second data correlator 1026. Further, even if, arguendo, one could interpret Richards' first data correlator 1008 and second data correlator 1026 as being "matched filters", as required by Claim 36, neither correlator receives "a pulse provided by the amplifier", as further required by Claim 36. A close examination of Richards reveals that first data correlator 1008 receives a template signal 1074

(not a pulse provided by an amplifier)(see [0193], lines 2-6), and the second data correlator 1026 receives template signal 1074 delayed by 5.0nsec (not a pulse provided by an amplifier) – which is NOT a pulse provided by an amplifier.

Applicants further traverse Examiner's determination that signal 1006 that is input to second data correlator 1026 is a "second" receive pulse shape. Figure 10 clearly shows receive pulse shape 1006 being simultaneously input to both first data correlator 1008 and second data correlator 1026. As such, Examiner's determination that Richards discloses a "second receive pulse shape" that is input to second data correlator 1026 is erroneous.

In light of the above, even if Gossett discloses an amplifier coupled to the input, Gossett does not teach or suggest the above described deficiencies of the Richards reference. Similarly, even if McCorkle discloses a receiver comprising a band select filter, as suggested by Examiner, McCorkle similarly fails to teach or suggest the above identified deficiencies of the Richards reference. Accordingly, any combination of Richards, Gossett and McCorkle fails to teach or suggest, "an **amplifier coupled to the band select filter**, the amplifier to bring an output of the band select filter to a desired level", "a **first matched filter coupled to the amplifier**, the first matched filter containing **circuitry to compare a pulse provided by the amplifier** to a first receive pulse shape and to provide an output sample based upon the comparison", "a **second matched filter coupled to the amplifier**, the second matched filter containing **circuitry to compare a pulse provided by the amplifier to a second receive pulse shape** and to provide an output sample based upon the comparison", as required by Claim 36. Accordingly, the 35 U.S.C. 103(a) rejection is improper and must be withdrawn.

In proceedings before the Patent and Trademark Office, "the Examiner bears the burden of establishing a prima facie case of obviousness based upon the prior art". In re Fritch, 23 USPQ2d 1780, 1783 (Fed. Cir. 1992) (citing In re Piasecki, 745 F.2d 1468, 1471-72, 223 USPQ 785, 787-88 (Fed. Cir. 1984). "The Examiner can satisfy this burden **only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the**

references", In re Fritch, 23 USPQ2d 1780, 1783 (Fed. Cir. 1992)(citing In re Fine, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988)(citing In re Lalu, 747 F.2d 703, 705, 223 USPQ 1257, 1258 (Fed. Cir. 1988)).

Although couched in terms of combining teachings found in the prior art, the same inquiry must be carried out in the context of a purported obvious "modification" of the prior art. **The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification.** In re Gordon, 733 F.2d at 902, 221 USPQ at 1127. Moreover, **it is impermissible to use the claimed invention as an instruction manual or "template" to piece together the teachings of the prior art so that the claimed invention is rendered obvious.** In re Gorman, 933 F.2d 982, 987, 18 USPQ2d 1885, 1888 (Fed.Cir.1991). See also Interconnect Planning Corp. v. Feil, 774 F.2d 1132, 1138, 227 USPQ 543, 547 (Fed.Cir.1985).

Moreover, obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill *in the* art. "The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." *In re Kotzab,* 217 F.3d 1365, 1370, *55* USPQ2d 1313, 1317 (Fed. Cir. 2000). See also *In re Lee,* 277 F.3d 1338, 1342-44, 61 USPQ2d *1430, 1433-34* (Fed. Cir. 2002) (discussing the importance of relying on objective evidence and making specific factual findings with respect to the motivation to combine references); *In re Fine,* 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones, 958* F.2d *347, 21* USPQ2d 1941 (Fed. Cir. 1992).

Applicants further point out that Examiner's determination that modifications of the prior art to meet the claimed invention would have been "well within the ordinary skill of *the* art at *the* time the claimed invention was made" because the references relied upon teach that all aspects of the claimed

invention were individually known in the art is not sufficient to establish *a* prima *facie case of* obviousness without some objective reason to combine the teachings of the references. *Ex parte Levengood, 28* USPQ2d 1300 (Bd. Pat. App. & Inter. *1993).* See also *In re Kotzab,* 217 F.3d 1365, 1371, 55 USPQ2d *1313,* 1318 (Fed. Cir. 2000) (Court reversed obviousness rejection involving technologically simple concept because there was no finding as to the principle or specific understanding within the knowledge of a skilled artisan that would have motivated the skilled artisan to make the claimed invention); *Al-Site Corp. v. VSIInt'l Inc.,* 174 F.3d 1308,50 USPQ2d 1161 (Fed. Cir. 1999) (The level of skill in the art cannot be relied upon to provide the suggestion to combine references).

Claims 37-43 stand allowable as depending directly, or indirectly, respectively from allowable Claim 36.

Claim 37 further defines the receiver of claim 36, wherein the receiver operates in a wireless communications network. Claim 37 depends from Claim 36 and stands allowable for the same reasons set forth above in support of the allowance of Claim 36.

Claim 38 further defines the receiver of claim 37, wherein the wireless communications network is an ultra-wideband communications network. Claim 38 depends from Claim 37 and stands allowable for the same reasons set forth above in support of the allowance of Claim 37.

Claim 39 further defines the receiver of claim 38, wherein the wireless communications network is a carrier-less ultra-wideband communications network. Claim 39 depends from Claim 38 and stands allowable for the same reasons set forth above in support of the allowance of Claim 38.

Claim 40 further defines the receiver of claim 38, wherein the wireless communications network is a wavelet-based ultra-wideband communications network. Claim 40 depends from Claim 38 and stands allowable for the same reasons set forth above in support of the allowance of Claim 38.

Claim 41 further defines the receiver of claim 36 further comprising an equalizer coupled to the first and the second matched filters, the equalizer containing circuitry to combine samples produced by the first and the second matched filters to produce an output signal. Claim 41 depends from Claim 36 and stands allowable for the same reasons set forth above in support of the allowance of Claim 36.

Claim 42 further defines the receiver of claim 36 further comprising a despreader having inputs coupled to the first and second matched filter and an output coupled to the equalizer, the despreader containing circuitry to remove a spreading code that is present in the signal. Claim 42 depends from Claim 36 and stands allowable for the same reasons set forth above in support of the allowance of Claim 36.

Claim 43 further defines the receiver of claim 36 further comprising: "a despreader having inputs coupled to the first and second matched filter and an output coupled to the equalizer, the despreader containing circuitry to remove a spreading code that is present in the signal" and "an equalizer coupled to the despreader, the equalizer containing circuitry to combine an output produced by the despreaders to produce an output signal". Claim 43 depends from Claim 36 and stands allowable for the same reasons set forth above in support of the allowance of Claim 36.

Objected to Claims 7, 25-28, 33 and 34 have been amended to be allowable. Claims 1-6, 8-24, 29-32 and 35-43 stand allowable for the reasons set forth above. Applicants respectfully request withdrawal of the remaining rejections and allowance of the application at the earliest possible date.

Respectfully submitted,

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